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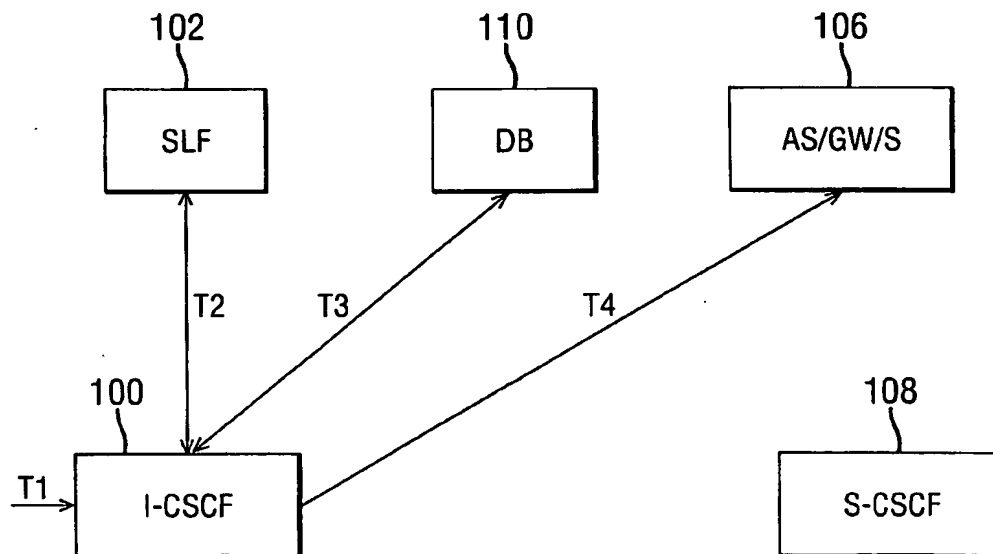
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[Continued on next page]

(54) Title: ROUTING MESSAGES VIA AN IMS SYSTEM



(57) Abstract: This invention relates to a method of routing for a message via an IMS system. A message is received at an ICSCF. Address information is obtained for one of an application server, server or gateway for which said message is intended. The message is sent to said application server, server or gateway in accordance with said address information.



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

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# INTERNATIONAL SEARCH REPORT

Application No  
PCT/IB2004/000546

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 H04L29/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H04L H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)  
EPO-Internal, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/147845 A1 (PLATA-ANDRES ISABEL ET AL.) 10 October 2002 (2002-10-10)  figures 1,2 paragraphs '0031! - '0044! paragraphs '0062! - '0065!	1-11, 22-31, 42,43
Y	-----	12-21
X	WO 02/096128 A (PESSI PEKKA; ISOMAKI MARKUS (FI); KISS KRISZTIAN (FI); NOKIA CORP.) 28 November 2002 (2002-11-28) page 6 - page 7 figures 2-6  ----- -/-	1-10, 22-31, 42,43

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
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- \* & \* document member of the same patent family

Date of the actual completion of the international search

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/160776 A1 (TORABI MOHAMMAD) 31 October 2002 (2002-10-31) figure 2 paragraphs '0002! - '0004! paragraph '0009! paragraphs '0013! - '0021! -----	1-11, 28-31,43
X	WO 02/43405 A (KAUPPINEN RISTO; NOKIA CORP (FI); PIRKOLA JUHA (FI)) 30 May 2002 (2002-05-30) page 16, line 25 - page 20, line 26 figure 5 -----	1-11,43
Y	WO 02/087265 A (WESTMAN ILKKA; NOKIA CORP. (FI)) 31 October 2002 (2002-10-31) page 1 - page 4 page 7 - page 9 -----	12-21
X	WO 02/082729 A (SAARI JARMO ILKKA; NOKIA CORP (FI); BAJKO GABOR (HU); BODOG GYULA) 17 October 2002 (2002-10-17) page 15, lines 20-26 page 20, lines 1-16 figures 6,7 -----	22,23, 28-31
X	"Digital cellular telecommunications system (Phase 2+);Universal Mobile Telecommunications System (UMTS); IP Multimedia Call Control Protocol based on SIP and SDP; Stage 3 (3GPP TS 24.229 version 5.3.0 Release 5); ETSI TS 124 229" ETSI STANDARDS, EUROPEAN TELECOMMUNICATIONS STANDARDS INSTITUTE, SOPHIA-ANTIPO, FR, vol. 3-CN1, no. V530, December 2002 (2002-12), XP014008075 ISSN: 0000-0001 -----	22,23,42
A	pages 56-58 -----	1-21, 24-31,43
X	US 2002/110104 A1 (FOTI GEORGE ET AL) 15 August 2002 (2002-08-15) figure 2 paragraphs '0011!, '0021!, '0022!, '0034! paragraphs '0027! - '0031! -----	32-41
A	US 2002/027915 A1 (FOTI GEORGE ET AL) 7 March 2002 (2002-03-07) paragraphs '0005! - '0017!, '0021! paragraphs '0028! - '0051! -----	32-41
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## INTERNATIONAL SEARCH REPORT

International Application No  
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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/154755 A1 (GOURRAUD CHRISTOPHE) 24 October 2002 (2002-10-24) figure 2 paragraphs '0007! - '0011! paragraphs '0025! - '0035! -----	44-57
X	WO 02/09365 A (MARTIN MARKUS ;WESTMAN ILKKA (FI); KAUPPINEN RISTO (FI); NOKIA COR) 31 January 2002 (2002-01-31) page 11, line 25 - page 25, line 22 -----	58-63
A	WO 02/098157 A (WESTMAN ILKKA ;NOKIA CORP (FI)) 5 December 2002 (2002-12-05) page 1 - page 3 pages 9-17 figure 9 -----	58-63

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IB2004/000546

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-31,42,43

Claims 1-31, 42 and 43 are directed to the optimization of message routing in an IMS system. This is done by routing messages from an I-CSCF function directly to a network function, respectively from a network function to an I-CSCF function.

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2. claims: 32-41

Claims 32-41 are directed to message routing to a proxy. This is done by converting a message received in accordance with a first protocol to a second protocol, and routing the message to the proxy using a new message identification information obtained after querying a database.

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3. claims: 44-57

Claims 44-57 are directed to providing a network service to a subscriber. This is done by using a subscriber database.

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4. claims: 58-63

Claims 58-63 are directed to an optimized way of providing call session control. This is done by implementing a call session control function which provides also in a second functioning mode an outbound proxy function.

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# INTERNATIONAL SEARCH REPORT

Application No  
PCT/IB2004/000546

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2002147845 A1	10-10-2002	CA 2440121 A1 WO 02071674 A2 EP 1366590 A2	12-09-2002 12-09-2002 03-12-2003
WO 02096128 A	28-11-2002	BR 0208543 A CA 2442568 A1 EP 1389396 A1 WO 02096128 A2 WO 02087265 A2 US 2004088419 A1 US 2004109439 A1	23-03-2004 28-11-2002 18-02-2004 28-11-2002 31-10-2002 06-05-2004 10-06-2004
US 2002160776 A1	31-10-2002	NONE	
WO 0243405 A	30-05-2002	WO 0243405 A1 AU 1860301 A	30-05-2002 03-06-2002
WO 02087265 A	31-10-2002	BR 0208543 A CA 2442568 A1 EP 1389396 A1 WO 02096128 A2 WO 02087265 A2 US 2004088419 A1 US 2004109439 A1	23-03-2004 28-11-2002 18-02-2004 28-11-2002 31-10-2002 06-05-2004 10-06-2004
WO 02082729 A	17-10-2002	DE 10116786 A1 EP 1380135 A1 WO 02082729 A1 US 2004121775 A1	24-10-2002 14-01-2004 17-10-2002 24-06-2004
US 2002110104 A1	15-08-2002	NONE	
US 2002027915 A1	07-03-2002	AU 8282601 A WO 0219649 A2	13-03-2002 07-03-2002
US 2002154755 A1	24-10-2002	NONE	
WO 0209365 A	31-01-2002	WO 0209365 A1 AU 6829600 A EP 1305913 A1	31-01-2002 05-02-2002 02-05-2003
WO 02098157 A	05-12-2002	WO 02098157 A1 BR 0117030 A CA 2447627 A1 EP 1402748 A1	05-12-2002 20-04-2004 05-12-2002 31-03-2004